



AATA International Inc.

STATEMENT OF QUALIFICATIONS

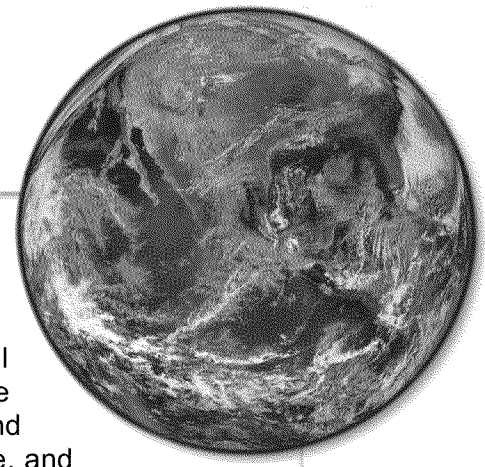
*International environmental and social consultants with
25 years of natural resource development project experience
in nearly 50 countries.*



◆ **WORLDWIDE HEADQUARTERS — DENVER, COLORADO USA** ◆

P: 720.583.2081 ◆ www.AATA.com ◆ info@aata.com

Tomorrow's Social and Environmental Solutions, Today!



AATA INTERNATIONAL, INC.

AATA International, Inc. (AATA) is a professional social and environmental consultancy specializing in management and permitting for natural resource development projects worldwide. Clients include Fortune 500 mining, oil and gas, utility, and other industrial companies; financial institutions; local, state, and federal government agencies, engineering companies and EPC contractors; and other entities in the USA and around the world.

Company History

AATA was founded in 1989 by Mr. John G. Aronson, President, under the name Advanced Aquatic Technology Associates, Inc. A distinct specialty of the firm was, and continues to be, environmental problem solving with respect to water issues. Water formed the basis for rapid expansion in world-class international projects in many remote locations. Over the years, AATA has evolved into a comprehensive environmental management and permitting firm offering logistics, coordination, and management of complex environmental programs, including international permitting and management of foreign specialists. Thus, in 1994, Advanced Aquatic Technology Associates, Inc. formally became AATA International, Inc.

Areas of Expertise

Disciplines of the firm include geology, hydrology, soils science, limnology, oceanography, aquatic and terrestrial ecology, natural resource management, environmental engineering, computer sciences and modeling, environmental monitoring, chemistry, ecotoxicology, statistics, water quality, meteorology and air quality, socioeconomics, archaeology, impact and risk assessment, and many more. The AATA network of professional associates covers virtually every important environmental discipline.

Our Niche

One of the secrets to AATA's success in the environmental management and permitting field is the importance we place on local involvement. Most of our projects involve a cadre of local specialists that provide financial, technical, political, and socio-cultural benefits to our clients as they strive to become part of an ever increasing privatization of global business. Our formula for success is to integrate local environmental expertise into an overall environmental management program, resulting in timely and cost-effective environmental permitting and management for our clients. AATA has established highly qualified networks of environmental professionals in all of the areas where we are active.

Client Base

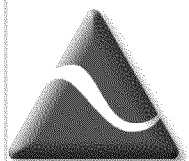
AATA serves a wide range of clients in the USA, former Soviet Union (Ukraine, Belarus, Russian Federation, Magadan Oblast, Kamchatka Oblast, Amur Oblast, Yakutia, Urals, Kazakstan), Latin America (Costa Rica, Colombia, Venezuela, Bolivia, Argentina, Ecuador, Brazil, Honduras, Chile, Peru), Europe (Romania, United Kingdom, and elsewhere), Indonesia (Sumatra, Java, Sumbawa, Bali, Kalimantan, and Irian Jaya), China, Mongolia, Myanmar, and the CircumPacific (Philippines, Thailand, Malaysia, Vietnam, and Southeast Asia).

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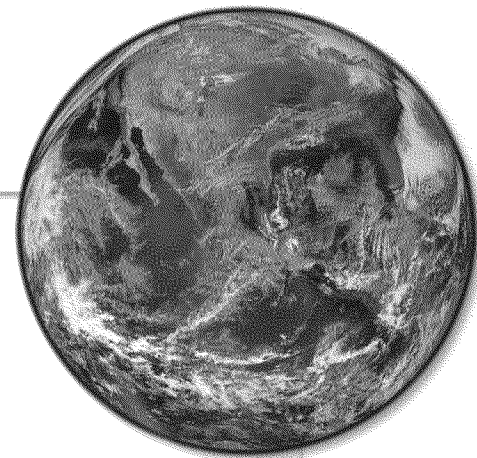
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AATA International, Inc. provides a wide array of social and environmental technical and management support services to clients worldwide. AATA works as an extension of your environmental staff to achieve high quality, professional results in a cost-effective manner.



The following is a partial listing of our services:

- Environmental due diligence and auditing
- Social and environmental impact, risk, and liability assessment (SEIA)
- Social and environmental monitoring and management programs (SEMMP)
- Social and environmental baseline studies - land, water, and sea
- Solid-state monitoring systems installation, operation, and maintenance
- Environmental modeling programs (air, hydrology, water quality)
- Environmental permitting programs (NEPA, CEQA, NPDES, CWA, SDWA)
- EP-3 Early Production Permitting Protocol – flash track permitting support
- International permitting programs
- Ecotoxicology testing programs (bioassays - fate, transport, and uptake)
- Comprehensive environmental and social management programs
- Reclamation, revegetation, recultivation, and closure programs
- Spill prevention, control, and counter measures plans
- Solid and hazardous waste management
- Surface water hydrology, geohydrology, water quality management
- Meteorological and air quality monitoring, modeling, & management
- On-site monitoring programs – satellite linked digital systems
- Permit compliance programs (MSHA, CERCLA, RCRA, TSCA)
- Training and technology transfer
- Lake and reservoir management programs
- Limnological, oceanographic, and fisheries investigations
- Environmental support to bankable feasibility studies
- Environmental support for multilateral development bank requirements
- Remote sensing and geographic information systems support
- Expert witness testimony support - criteria, standards, impacts, risk
- Stakeholder identification, mapping, and engagement
- Community development programs, outreach, grievance mechanisms
- Competent person environmental and social support to NI 43-101
- Expert witness testimony, support for World Bank, ICSID arbitration
- Comprehensive environmental and social management support
- Large-scale document preparation and review, mapping, DBMS
- Web-based environmental and social management programs (www.aata.info)

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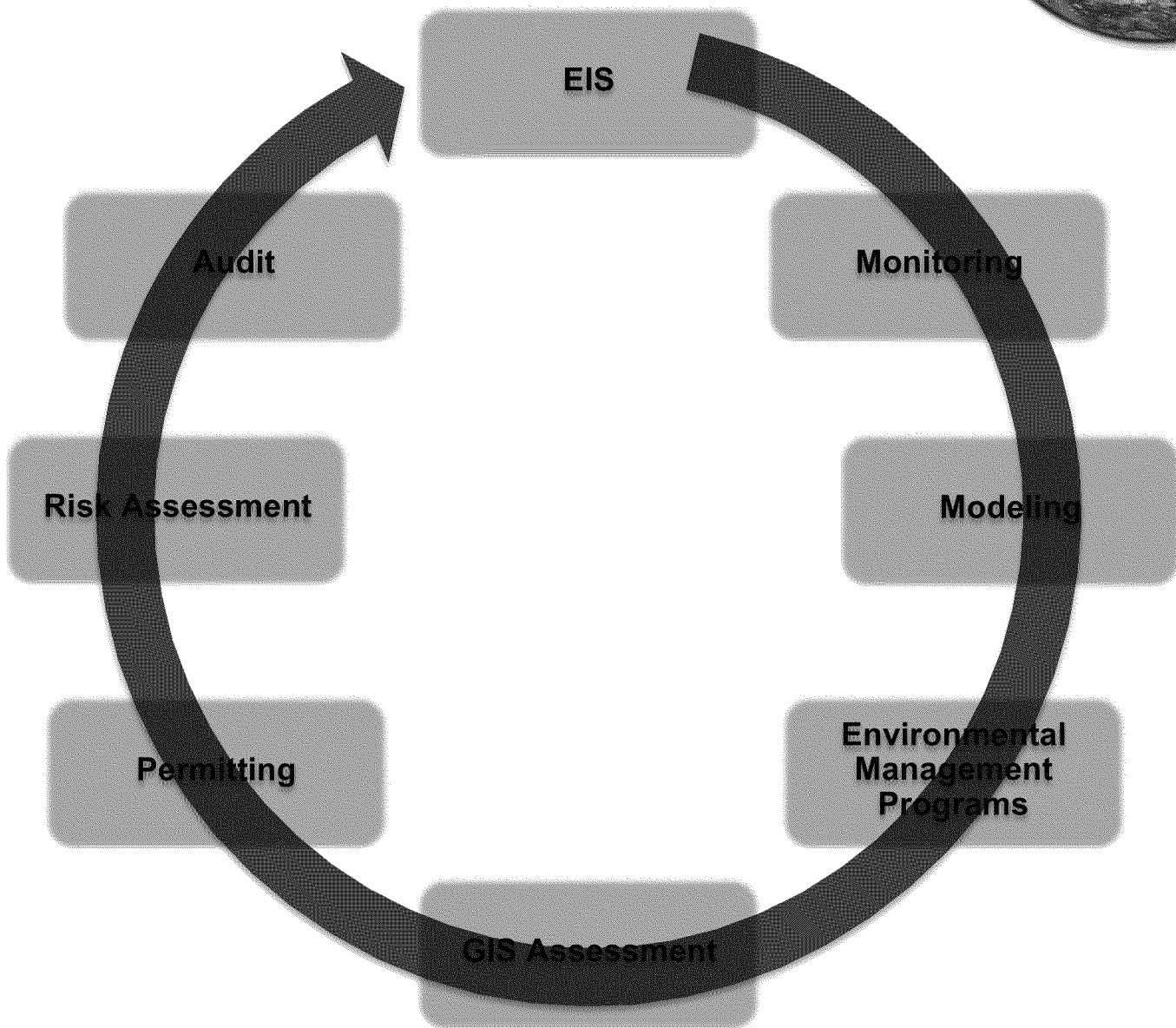
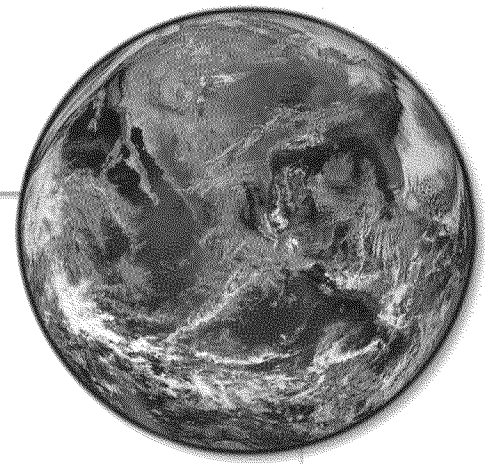
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AATA International, Inc. provides the entire gamut of environmental and social services necessary for natural resource development in the 21st century.

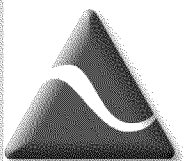


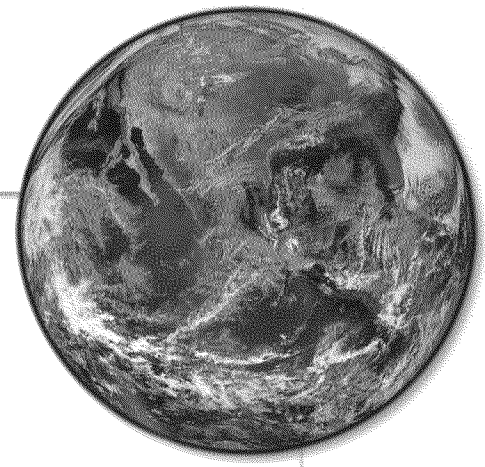
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Since 1989, AATA International, Inc. has supported mining companies throughout the entire process of carrying out complex projects, from early planning and permitting through exploration, construction, operation and closure. Some of our featured mining projects include:

Las Brisas Copper/Gold Project

Gold Reserve Corporation

Venezuela

Large-scale VZ and International ESIA program, including all necessary baseline investigations, physical, chemical, biological, and social programs. Management and production of VZ and International ESIAs, Environmental and Social Management and Monitoring Program, Biodiversity Offset Strategy, Community Development Plan, Resettlement Action Plan, Indigenous Peoples Plan, and other related plans and documents. Conducted field and lab investigations of soils, surface water, groundwater, flora, and fauna. Detailed fisheries investigations in high biodiversity area. Project won 1st place poster at 2008 International Association for Impact Assessment (IAIA) Annual Conference, Perth, Australia.

Buryatzoloto Gold Mining Project

EBRD Environmental Due Diligence

Buryatia, Russian Federation

Environmental due diligence of Irokinda and Zun Holba underground gold mines. Worked with Mr. Robert Ferriter, health and safety specialist from the Colorado School of Mines. Provided two separate comprehensive inspections in 2003 and 2005 to include all operations including underground mining, crushing, grinding, processing, cyanide recovery, and tailings pond components. Reporting directly to EBRD and project sponsors, Buryatzoloto Gold Mining Company.

Baruun Naran Coal Mining Project

QGX Ltd.

Mongolia

Large-scale baseline and EIA studies for a coal mine in the southern Gobi desert, Mongolia. Working with local Mongolian technical representatives to advance a fast-track coal mining project. Includes detailed investigations of meteorology (installed high tech met station), air quality (using modern Minivol samplers), flora, fauna, soils, surface and groundwater, among other parameters.

Lost Soldier and Lost Creek ISR Projects

Ur Energy USA Inc.

Casper, Wyoming

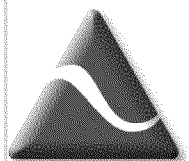
Principal-In-Charge for comprehensive permitting program for ISR mining projects in Wyoming. Fasttrack program using AATA Early Production Permitting Protocol (EP -3[®]) was engaged to advance uranium mining projects near the historic Sweetwater Mining District. Extensive, multi-track baseline program covering all physical, chemical,

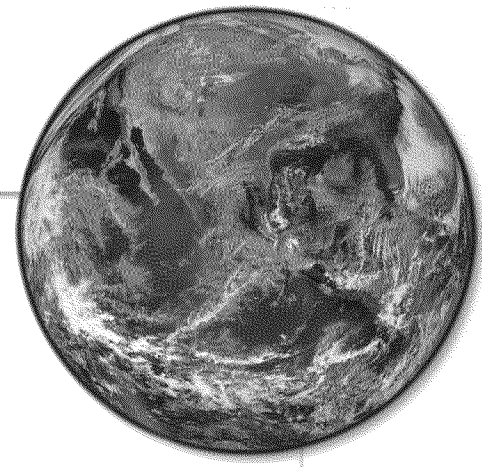
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biological, social, and regulatory components.
Developed and submitted permit applications to US Nuclear Regulatory Commission and Wyoming DEQ.

West Alkali Creek ISR Project

*Wildhorse Energy USA
Denver, Colorado*

In Situ Recovery (ISR) Uranium project, Wyoming. Conducted extensive baseline investigations and advanced ISR project using AATA EP-3 protocols.

Ozernoe Lead/Zinc Project

*Lundin Mining Corporation
Ozernoe, Buryatia, Russian Federation*

One of world's largest lead/zinc projects, Buryatia, Russian Federation. Organized strategy and logistics for engaging new J/V mining project under latest Russian regulations.

Kuranakh Gold Mining Project

*Echo Bay Mines and Newmont Mining Corp.
Yakutia, Sakha Republic*

Environmental due diligence survey for large placer with heap leach pilot facility. Comprehensive physical, chemical, biological, and social environmental review program. Sampling and analysis of tailings ponds, Kuranakh River, Aldan River, and local tributaries. Meteorological and air quality data analysis. Hydrological monitoring, comprehensive surface and groundwater monitoring program. Fisheries and aquatic ecological assessment. Environmental baseline studies and assessment. Served as principal liaison for Aldan raion and Sakha Republic permitting functions, 1996-2001.

Dukat Silver Project, Magadan Oblast, Russia

*Pan American Silver Corporation
Assoc: Eastern Scientific Research Institute for Gold and Precious Metals
(VNII-1), Magadan, Russia*

AATA serves as the principal environmental management and permitting contractor for this large silver mining project in the Russian Far East. AATA was responsible for all environmental coordination, preparation of EIA and OVOS documents, bank liaison with International Finance Corporation (IFC), monitoring, modeling, and permitting.

Kubaka Gold Mining Project, Magadan Oblast, Russian Federation

*Cyprus Amax Minerals Company and Omolon Gold Mining Company
Assoc: Institute for Biological Problems of the North (IBPN)
Eastern Scientific Research Institute for Gold and Precious Metals (VNII-1)*

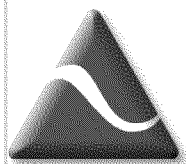
AATA served as Environmental Management and Permitting Contractor for the first Western/Russian joint-venture gold mining project in the Magadan Oblast, Russian Far East. Responsible for the management of the "Expertiza" environmental permitting process, environmental monitoring, and compliance planning. Organized a local

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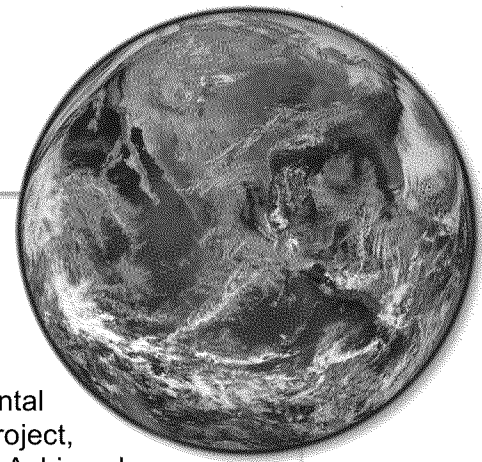
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environmental team using specialists from local research institutes. Completed baseline environmental monitoring programs. Installed, operate, and maintain high-tech meteorological and hydrological monitoring stations. Provided technology transfer and training to local specialists. Completed the environmental documentation necessary for successful permitting of the project, including the Russian Environmental Analysis Report (OVOS). Achieved Oblast level and Moscow level Expertiza approval for the project.



Pokrovskoye Gold Mining Project, Amur Oblast, Russian Federation

Homestake Mining Company and P.M. Tokur Zoloto Mining

Assoc: VPT and Amur KNII

AATA served as Environmental Management Contractor for the feasibility phase environmental investigations of the Pokrovka Gold prospect near Tygda, Amur Oblast, Russian Far East. Conducted two field investigations of local physical, chemical, and biological characteristics of the mine site. Assessed baseline water quality, local fisheries, plants, and wildlife of the area. Completed Environmental Analysis Report (OVOS) for the project, and performed liaison with International Finance Corporation.

Aginskoye Gold Mining Project, Kamchatka Oblast, Russian Federation

ASARCO/KINROSS Mining and KamGold Mining Company

Assoc: OVOS Committee, IBPN, KamchatNIRO, Institute for Ecological Problems

AATA served as the principal Environmental Management and Permitting Contractor for the project located near Milkovo on the Kamchatka peninsula of the Russian Far East. Conducted winter and summer environmental surveys, including local fisheries and water quality. Completed Environmental Analysis Report (OVOS), achieving Oblast - level and Moscow -level approval. Organized team of local specialists to assist in the Expertiza process. Performed detailed limnological and fisheries investigations of the Aga Creek, Kopylye River, and Kopylye Lake, including remote, unattended monitoring of pH, Conductivity, Depth, Temperature, and Turbidity using modern CR10X datalogger coupled with YSI 6820 water quality sonde (system integration and programming by AATA).

Julietta Gold Mining Project, Magadan Oblast, Russian Federation

Arian Resources/MPH Consultants and Omsukchan Gold Mining Company

Assoc: IBPN, VNII-1, and GOT Consultants

AATA served as the principal Environmental Management and Permitting consultant for the gold mining project located near Omsukchan, Magadan Oblast, Russian Far East. Completing the Expertiza environmental permitting process. Conducted environmental baseline studies and Environmental Analysis Report (OVOS) in support of Expertiza permitting. Field investigations included disciplines of botany, hydrology, geology, chemistry, mammalogy, ichthyology, ornithology, reclamation, and hydrobiology.

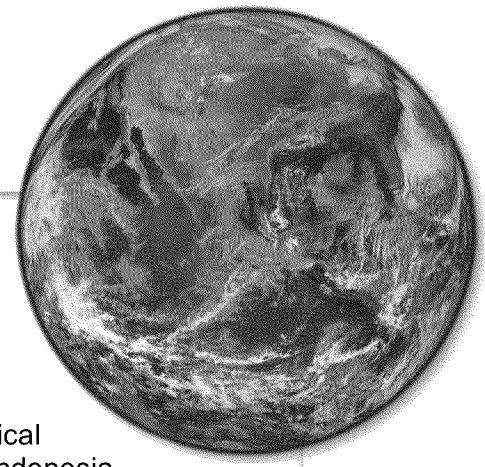
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**Batu Hijau Copper/Gold Mining Project,
Sumbawa, Indonesia**

*P.T. Newmont Nusa Tenggara and Newmont Mining Corporation
Assoc: Qipra Galang Kualita, Southwest Labs, TAI Environmental
Consultants*

AATA serves as a principal Environmental Management and Technical consultant for this large copper/gold mining complex in Sumbawa, Indonesia. Provided review of environmental baseline investigations, environmental management planning, and integrated physical, chemical, and biological modeling of waste discharges to the Indian Ocean. Set up field laboratory capabilities for analysis of degradable parameters such as COD/BOD, bacteria, and other water quality parameters.

Mongolian Uranium Mining Project, Mongolia

*WM Mining Company and Uranium Resources, Inc.
Assoc: Local Mongolian institutes and contacts*

AATA served as the principal Environmental Management Consultant for this western/Mongolian uranium project located in northeastern Mongolia. Conducted site investigations and environmental due diligence analysis for the originally Russian-operated facilities.

Myanmar Copper Mining and Milling Project, Monywa, Myanmar

*MinCorp Ltd. for Ivanhoe Myanmar Holdings Ltd.
Assoc: HydroTriad and InterMountain Labs*

AATA was the principal Environmental Management and Technical consultant to the first western/Myanmar joint venture mining project near Monywa, Myanmar. AATA installed and is operating through its local associates a high-tech meteorological monitoring station at the site. AATA has conducted two environmental baseline investigations of the site, including sampling and observation of water quality, hydrology, vegetation, wildlife, forests, and other ecological attributes. Conducted first professional Environmental Impact Statement in Myanmar, as well as detailed Environmental Health Risk Assessment for site and surrounding area.

Tengizchevroil Environmental Support Program

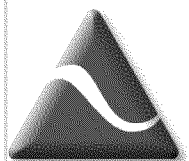
Tengizchevroil (TCO) ChevronTexaco, operators, Tengiz, Kazakhstan
Provided wide range of interdisciplinary environmental support to TCO operations in Kazakhstan related to existing and proposed projects.

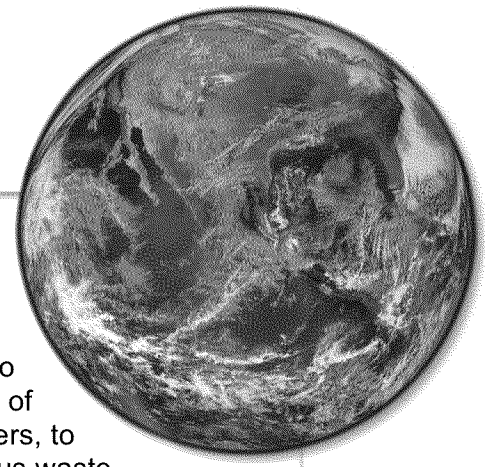
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The Environmental Audit has become a standard activity for many governmental, industrial, and agricultural entities around the world to identify environmental problems, to check compliance with established and proposed regulations, and to investigate the environmental liability, risk, or impact of various types of activities. Environmental audits are used to evaluate property transfers, to establish existing levels of air pollution, water pollution and hazardous waste, to analyze the extent of prior pollution at proposed development sites, and to satisfy the environmental requirements of lending institutions worldwide. Thus, the Environmental Audit has become an integral component of many comprehensive environmental programs for a variety of reasons.

Industrial corporations as well as government institutions often wish to audit facilities to check for compliance with existing regulations, or to evaluate the existing levels of risk or impact to the surrounding human population, as well as to important local aquatic and terrestrial ecological resources. Due diligence review of sites for new projects or expansions of existing operations is now a standard practice, providing crucial information regarding environmental liabilities and risk.

AATA International, Inc. provides clients with comprehensive environmental Audit capabilities worldwide. AATA has provided audit support for many different types of industries, including pulp and paper, mining, oil and gas exploration and production, manufacturing, water resource development, agricultural development, and other activities.

AATA utilizes the latest in modern portable field equipment to investigate remote sites under harsh environmental conditions. AATA can determine water quality, air quality, and radiological conditions using advanced instrumentation. Also, AATA is an expert in the utilization of aquatic and terrestrial ecological indicator or "sentinel" species which can be used to interpret the ecological health of various types of ecosystems, including wetlands, lakes, rivers, streams, estuaries, nearshore, and oceans.

AATA often designs specific environmental audit checklists that are customized for specific facilities, localities, and conditions. AATA has performed remote baseline, audit, and other environmental investigations for a variety of clients in many areas around the world including the following:

Africa
Argentina
Belarus
Canada
China
Circumpacific Region
Colombia

Costa Rica
Honduras
Indonesia
Kazakhstan
Magadan Oblast
Mongolia
Myanmar

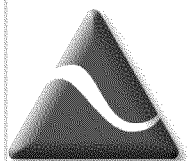
Niger
Romania
Russian Federation
Ukraine
United States
Venezuela
...and more!

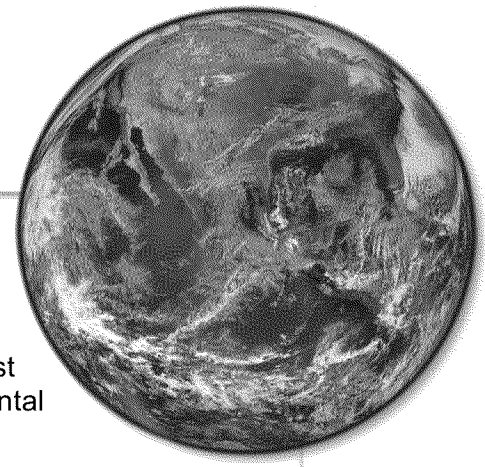
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AATA International, Inc. provides interdisciplinary skills for social and environmental impact, risk, and liability analysis worldwide. Our professional core staff combines with local experts through a number of strategic associations within the host countries to provide the best combination of skills for rapid and cost-effective social and environmental support. Services provided are as follows:

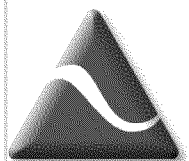
- Social and Environmental Impact Assessment (SEIA)
- Acquisition and analysis of remote sensing data including LANDSAT, SPOT, and other sources
- Geographic information systems for data analysis and presentation
- On-line scientific literature review for rapid initial project review
- Acquisition and analysis of local historic environmental data
 - Geology and soils
 - Geophysics and geochemistry
 - Topography and mapping
 - Climatology, meteorology, and air quality
 - Hydrology
 - Water Quality
 - Terrestrial and aquatic ecology
 - Rare and endangered species
 - Sensitive habitats and areas
 - Socio-cultural and Archaeological
 - Economics
 - Mineral resource data
 - Existing infrastructure
 - National parks, reserves, and protected areas
 - Other factors affecting logistics
- Environmental Expeditionary Team for remote data collection
- Remote solid-state continuous data collection platforms
 - Hydrology and water quality
 - Meteorology
- Short- and long-term environmental monitoring programs
- International permitting and regulatory liaison
- Environmental report preparation, including statistics and graphics
- Expert witness testimony preparation
- Comprehensive Social and Environmental Management Plans (SEMP)
- Environmental audits and assessments to satisfy world financial institutions
 - World Bank, IFC, EBRD, OPIC, EXIM, ADB, IDB
- Feasibility study environmental input and analysis
- Project logistics and planning

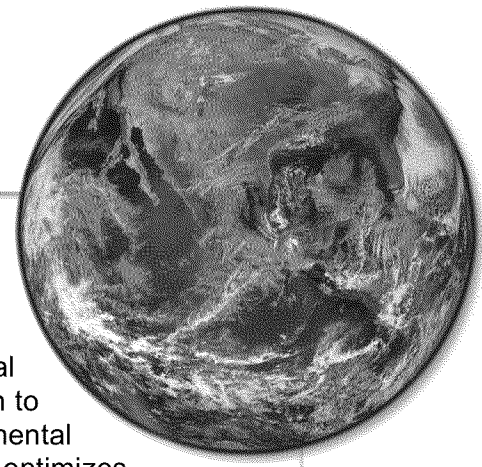
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AATA International, Inc. provides strong environmental management and interdisciplinary technical skills for third party independent environmental impact, risk, and liability analysis in support of lead Federal Agencies. Our professional core staff combines with local experts through a number of strategic associations within the project region to provide the best combination of skills for rapid and cost-effective environmental support. AATA's unique web-based environmental management approach optimizes information flow, specialist coordination, document preparation, agency coordination, public consultation and outreach, and review cycles. Services provided are as follows:

- Project Strategy Development for NEPA Compliance
- Scoping Process, Agency Liaison, Posting, Public Meetings
- Acquisition, analysis, and utilization of remote sensing data including LANDSAT, SPOT, and other sources
- Geographic information systems for data analysis and presentation
- On-line scientific literature review for rapid initial project review
- Acquisition and analysis of local historic environmental data:
 - Geology and soils
 - Geophysics and geochemistry
 - Topography and mapping
 - Climatology, meteorology, and air quality
 - Hydrology
 - Water Quality
 - Terrestrial and aquatic ecology
 - Rare and endangered species
 - Sensitive habitats and areas
 - Socio-cultural and Archaeological
 - Economics
 - Mineral resource data
 - Existing infrastructure
 - National parks, reserves, and protected areas
- Environmental Expeditionary Team for remote data collection
- Remote solid-state continuous data collection platforms:
 - Hydrology and water quality
 - Meteorology
- Short- and long-term environmental monitoring programs
- EA/EIS report preparation, including statistics and graphics
- Comprehensive Environmental Management Plans
- Public participation, scoping, public hearings, outreach
- Agency liaison, optimizing review cycles, fast-tracking schedules

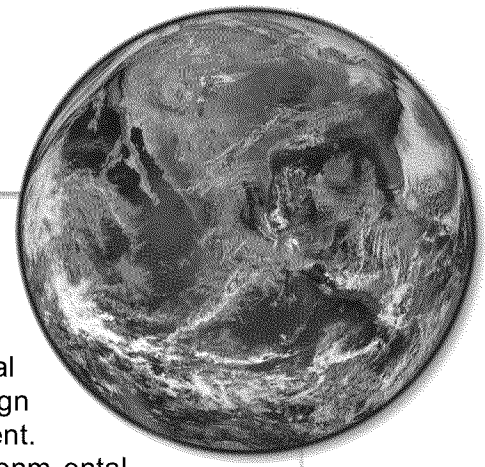
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Natural resource development projects (mining, oil and gas, thermal power, pulp and paper, etc.) and manufacturing projects face a myriad of environmental requirements domestically and internationally. Environmental requirements of multinational corporate environmental policies, US regulatory agencies, multilateral development banks, and foreign governments require significant expenditures for environmental management. AATA International, Inc. provides multinational clients with integrated Environmental Management Programs (EMP) which can achieve environmental compliance for all concerns. The EMP is organized so that all requirements can be achieved with a minimum of overlap, a minimum of staff, at a minimum cost--with maximum results. Since all programs are coordinated, a single monitoring effort can be set up to provide data for all elements. The latest in solid-state monitoring technology (meteorological and air quality stations, hydrological and water quality stations, and other continuous monitoring stations) are utilized to provide continuous data where required. Biomonitoring, ecotoxicological monitoring, and health and safety reporting are fully integrated depending upon project requirements. For international projects, AATA involves local technical expertise, provides technology transfer and training, and creates a local environmental team which ultimately can take over the day-to-day operations of the EMP for the client. This approach maximizes local interaction, and creates the most favorable team--technically, financially, and socio-culturally. Elements of typical EMPs include the following:

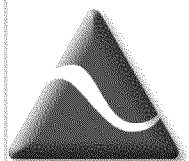
- Environmental Baseline Monitoring
- Environmental Audit / Impact and Risk Assessments
- Environmental Permitting Strategy and Implementation
- Long-term Environmental Monitoring
- Spill Prevention, Control, and Countermeasures
- Reclamation / Revegetation
- Air Quality Protection
- Water quality Protection
- Erosion / Sediment Control
- Environmental Health and Safety
- Solid and Hazardous Waste Management
- Training, Technology Transfer & Socio-Cultural "Outreach"
- Abandonment and Closure

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AATA INTERNATIONAL, INC. provides comprehensive groundwater (geohydrological) support services to municipal, industrial, agricultural, and other water users throughout

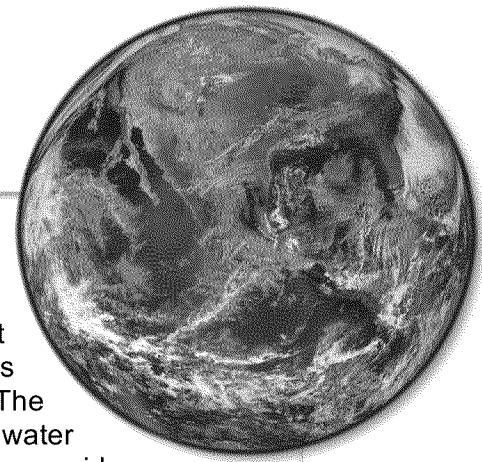
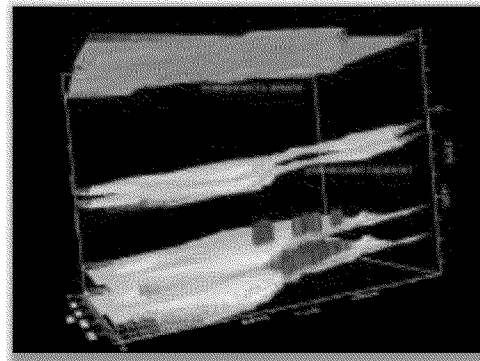


the United States and worldwide. The AATA Groundwater Action Team provides rapid, cost-effective response for a wide variety of groundwater projects including water supplies, *in situ* uranium, coalbed methane

development, oil and gas projects, mining projects, temporary underground storage, dewatering projects, among others.

AATA groundwater services include the following:

- Applied geohydrological and geochemical studies
- Comprehensive groundwater evaluation programs
- Groundwater sampling programs including "Ultra clean" protocol
- Field water quality testing programs and laboratory analysis
- Portable high-tech lab capabilities
- Groundwater modeling of all types of systems
- Advanced yet very low-cost 3-D animated geohydrologic modeling (3D MODFLOW and other models from GeoLink, Moscow, Russia)
- Groundwater supply development, wellfield development and management
- Groundwater contamination remediation studies
- Water rights investigations
- Environmental site assessments
- Geohydrological fate and transport studies
- Integrated surface and groundwater programs
- Water rights evaluations
- Expert witness testimony on controversial cases
- Web-based geohydrological information and monitoring systems
- Serving all 50 states with rapid response consulting support
- Experience in the US and over 35 countries around the world

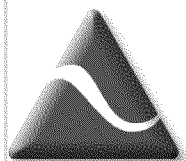


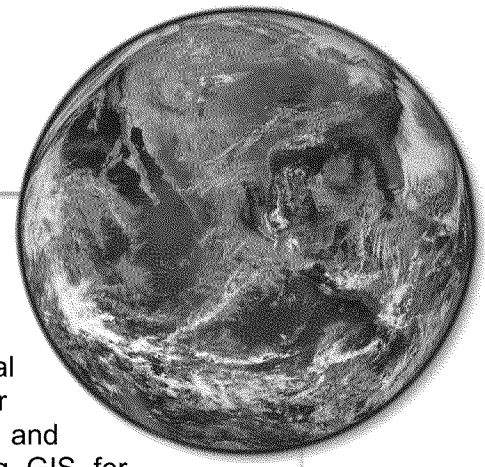
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AATA International, Inc. scientists efficiently conduct comprehensive watershed management by combining the analytical power of Geographic Information Systems (GIS) with advanced computer models and an expert knowledge of natural systems. In comprehensive watershed management, GIS and water quality models are used to identify and assess the sources, sinks, and filters of water quality contaminants within the watershed. Using GIS for comprehensive watershed management, AATA provides resource managers with the information needed to make fully informed decisions and optimize resource management objectives.

Comprehensive watershed management is an effective approach for pollution prevention and control, natural resource use and management, and planning and development within both rural and urban watersheds. Assessments of watershed characteristics and land use practices can be completed over entire watersheds to identify non-point pollution sources and viable alternatives for their control. Using GIS these can then be combined with known point sources and evaluated against watershed management objectives to identify the opportunities and constraints affecting quality of water supplies in the watershed. AATA provides the information resource managers need to achieve their watershed management objectives.

Examples of prime applications for comprehensive watershed management include:

- Evaluating the impacts of alternative land use decision options upon water supplies
- Prioritizing water supply protection and reservoir water quality control efforts
- Identifying and controlling sources of non-point contaminants in stormwater and agricultural runoff
- Controlling and managing the impacts of mining, agriculture, timber harvesting, and other land clearing activities upon streams, rivers, lakes, reservoirs, estuaries, and oceans.

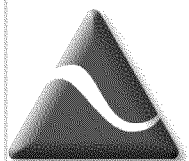
AATA has the capability to integrate your existing water and land data with satellite (imagery) data, vector (mapping) data, and tabular attribute data using GIS for comprehensive watershed management programs. We maintain the capability to use a variety of GIS, Remote Sensing, and modeling software including Arc/Info, Geo/SQL, ERDAS, IDRISI, ANSWERS, SWIM, QUAL2E, EUTROMOD, and others.

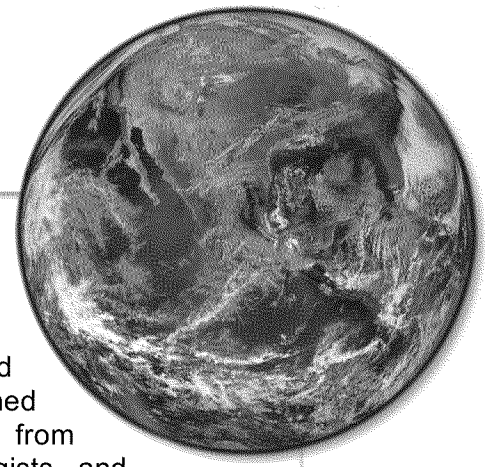
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AATA INTERNATIONAL, INC. provides a wide array of interdisciplinary watershed management support services to local, county, state, and federal entities, as well as large -scale land owners and industrial organizations with watershed management challenges. AATA's approach to integrated watershed management involves a wide range of discipline specialists, from hydrologists and water quality specialists, to fisheries biologists and microbiologists, for encompassing the entire physical, chemical, biological, and socio-cultural spectra involved in this type of work.

The Integrated Watershed Management Approach requires careful application of many different scientific disciplines in a framework that can be understood by all stakeholders. This requires strong communication skills. AATA's Web-based environmental management approach provides an excellent medium to illustrate, educate, and inform watershed stakeholders at all levels.

AATA staff possess professional experience in an extensive variety of watersheds throughout the United States and around the world, from high elevation mountains to sweltering equatorial jungles. In the United States, AATA staff have completed projects in nearly all 50 states over the past 26 years. We invite your inquiries and serious consideration as you advance your watershed management program. The following summarizes some of the important watershed management and protection services offered by **AATA INTERNATIONAL, INC.**:

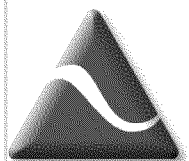
- **Watershed characterization and evaluation**
 - Hydrology, geohydrology, geology, soils, topography, mapping
 - Water quality, point and nonpoint source pollutant identification
 - Ecotoxicology, fate and transport of pollutants, impact and risk
 - Aquatic and terrestrial resources, riparian zones, critical habitats
 - Threatened and endangered species, sentinel species, commercial species
 - Land use - native, agricultural, industrial, municipal, infrastructural
- **Watershed vulnerability assessments**
 - Identification of major watershed threats-physical, chemical, biological, anthropogenic
 - Probability assessment for selected parameters - metals, organics, pesticides, sediment
- **Reservoir management programs**
 - Functional limnology review, eutrophication control, biomanipulation
 - Phytoplankton, zooplankton, benthos, fish, molluscs, other wildlife
 - Water quality modeling, evaluation of reservoir operational scenarios
 - Hydropower, instream flow, downstream impacts, and other analyses
- **Evaluation of alternative land use decision options - modeling and prediction**
 - Forestry, agriculture, industrial development, subdivisions, highways and bridges
 - Mining, land clearing, reclamation, remediation, and restoration activities

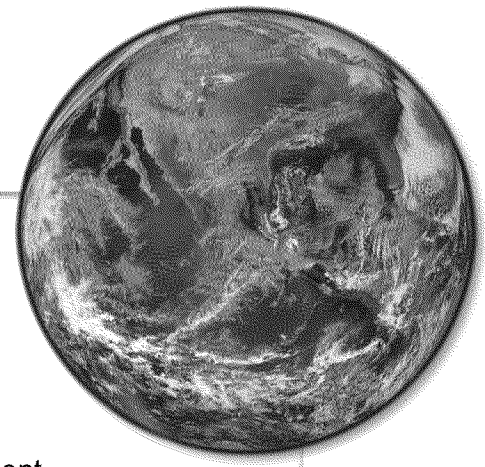
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- **Integrated Watershed Management and Protection Program Development**

- Identification and prioritization of alternatives, integration of best management practices
- Erosion and sediment control options, economic and environmental review
- Stormwater and non-point source control strategies, nutrient control strategies
- Total Maximum Daily Load determinations/Waste load allocation programs
- Advanced Geographic Information Systems (GIS), video mapping, remote sensing analysis



- **Watershed Monitoring Programs**

- Hydrology, geohydrology, water quality, aquatic and terrestrial ecology, bioindicators
- Ecotoxicological, radiological, microbiological, entomological, ichthyological programs
- Solid-state monitoring systems, flood warning, gaging stations, water quality monitors
- Meteorological and air quality stations, precipitation monitoring, airborne transport

- **Web-based watershed management systems**

- Stakeholder identification, evaluation, recruitment, and communication
- Documentation, illustration, demonstration, communication
- Stakeholder outreach and disclosure, non-governmental organizations (NGOs)
- Watershed training program evaluation and development

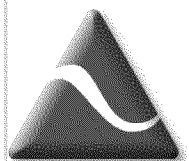
Look to **AATA INTERNATIONAL, INC.** for all of your watershed management support requirements, from current compliance to comprehensive web-based watershed management systems. AATA staff members have the experience and track record to help you with any watershed management problem. Call the AATA Surface Water Action Team of watershed management experts today!

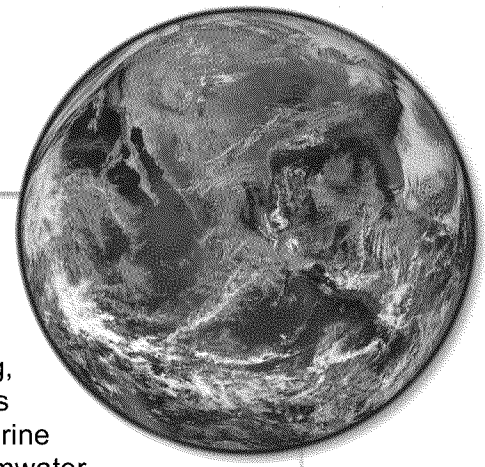
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AATA International, Inc. provides a wide variety of fisheries support services to industrial, municipal, and other clients throughout the world. AATA is equipped with the latest in fish locating and capturing gear, including echo-location, netting, trawling, seining, trapping, and electrofishing. AATA provides clients with the capabilities to work in virtually any type of freshwater or marine ecosystem, from high altitude and arctic coldwater fisheries to warmwater estuarine/marine ecosystems of the tropical equatorial region. A summary of services follows:

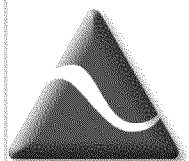
- Literature research and reviews, analysis of historical data
- Monitoring program design and equipment selection
- Fisheries surveys/monitoring for all types of ecosystems:
 - Diving, echo-location, seining, trapping, netting, trawling, electrofishing
- Species composition and abundance studies
- Instream flow studies using Instream Flow Incremental Methodology
- Fish habitat surveys, habitat suitability indices
- Determination of Index of Biotic Integrity (IBI)
- Thermal impact analysis studies, Section 316(a) demonstrations
- Impingement and entrainment investigations
- Ecotoxicological studies of fish
 - Acute and chronic toxicity testing
 - Caged fish studies
 - On-site biomonitoring
 - Bioaccumulation studies of metals and organics
 - Histopathological studies
- Aquatic ecological studies of fish food organisms
 - Periphyton (attached algae)
 - Benthic macroinvertebrates
 - Forage fishes
 - Other organisms
 - Fish food analysis (gut analysis)
- Ecological impact and risk assessments
- Fish kill investigations, forensic aquatic ecology studies
- Migration and tagging experiments
- Population estimates and condition coefficients
- Determination of fisheries population structure (age and growth-scale analysis)
- Use of fish as biomonitors
- Biomanipulation studies

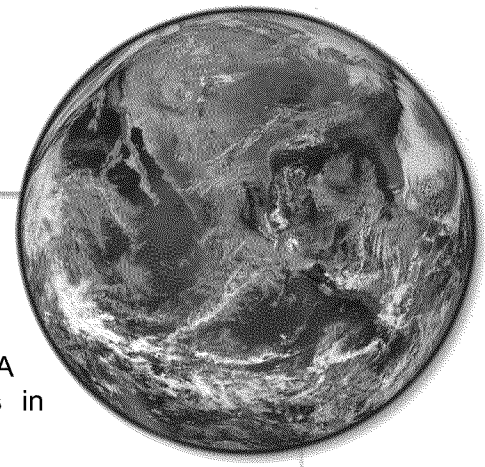
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Limnology is the integrative science of freshwater and is synonymous with aquatic ecology. Limnology deals with the physical, chemical, and biological interactions in rivers, lakes, reservoirs, streams, and other aquatic ecosystems. AATA International, Inc., provides a wide array of technical services in limnology / aquatic ecology.

AATA services are used to solve many limnological problems:

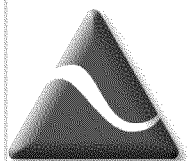
- Eutrophication control programs
- Lake management programs
- Stream rehabilitation
- Environmental impact assessment
- Mitigation planning
- Sediment control strategies
- Fate of organic pollutants
- Ecological risk assessment
- Heavy metal impact assessment
- Identifying pollution sources
- Ecosystem characterization
- Water quality criteria development
- Impact of water exchanges
- Achieving designated uses
- Water quality monitoring
- Water quality modeling
- Lake and reservoir surveys
- Circulation studies
- Lake management programs
- Sediment surveys
- Pollutant fate and transport studies
- Bathymetric surveys
- Innovative limnocorral studies
- Use-attainability studies
- Limiting nutrient tests
- C-14 primary productivity tests
- Biological analyses:
 - Phytoplankton
 - Zooplankton
 - Benthos
 - Fish
 - Aquatic macrophytes
 - Wetlands

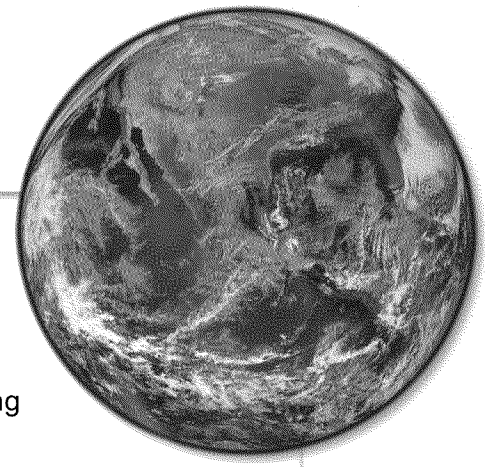
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AATA International, Inc., provides comprehensive capabilities for instream flow studies, principally using the instream flow incremental methodology (IFIM) developed by the U.S. Fish and Wildlife Service. The procedure is useful in evaluating a wide range of important water management concerns related to increasing or decreasing flows of rivers and streams.

AATA provides clients with all of the capabilities for fish/fish habitat assessments including the latest in solid -state electrofishing techniques, hydrologic gaging stations, computer modeling, and aquatic ecological assessment techniques. There are many applications using IFIM, including assessments of:

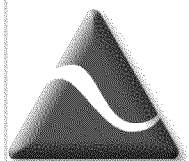
- Reservoir operations
- Hydroelectric projects
- Diversions
- New dam construction
- Channelization
- Lock and dam operations
- Rerouting of stormwater
- Other watershed modifications

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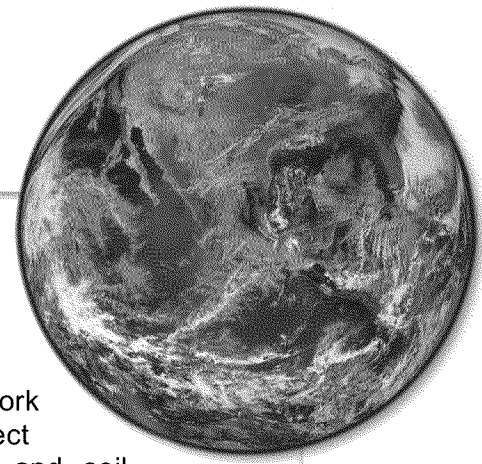
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AATA International, Inc. wetland scientists routinely conduct wetland assessments and delineations to assist clients in meeting Section 404 permit requirements of the Clean Water Act. Professionals at AATA assist clients through the often complex and time-consuming regulatory requirements under a network of federal, state and local policies and regulations designed to protect wetlands. AATA's experienced team of botanists, hydrologists and soil scientists can efficiently identify and map wetlands following guidelines established in the 1987 Corps of Engineers Wetlands Delineation Manual. AATA maintains close coordination with clients and Corps of Engineer officials responsible for permitting to ensure that any permits required under Section 404 are processed quickly and that any potential problems are identified early and solved so that projects are maintained on schedule and budget. Scientists at AATA can assist clients in planning their operations to minimize disturbance to wetlands and provide wetland mitigation alternatives if disturbance cannot be avoided.



For large scale wetlands mapping, AATA combines ground truthing with aerial photography (i.e. Color Infrared), and satellite imagery (LANDSAT, SPOT) to delineate wetlands and vegetation. This information can be readily combined into AATA's Geographic Information System (GIS) and integrated with other chemical, physical, and biological attribute data with computer modeling to provide clients with a powerful assessment tool.

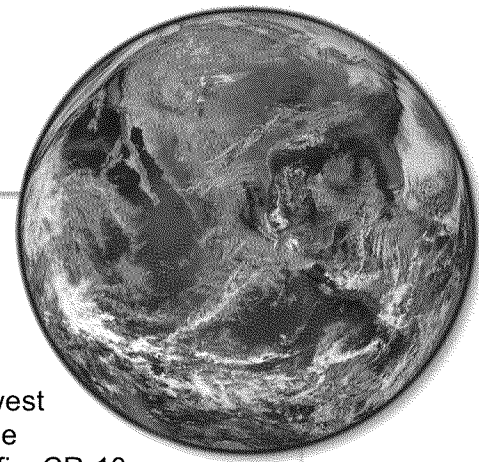
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AATA International, Inc. provides the latest in solid-state meteorologic, hydrologic, and water quality monitoring systems. Advances in computer technology now allow for continuous recording of many important environmental parameters. The AATA ultrasonic hydrologic monitoring station is the newest innovation for non-invasive gaging of rivers, lakes, and streams. The system combines the rugged reliability of the Campbell Scientific CR-10 datalogger and the new Lundahl ultrasonic sensor for continuous stage e-height recording—continuous recording with absolutely no submerged instruments, no pressure transducers, and no stilling wells.

AATA assists clients with design and implementation of remote stormwater sampling systems that are flow-actuated and flow-proportional. New programmable auto samplers are deployed at strategic locations to acquire representative water quality samples for assessment of non-point sources and stormwater quality.

Typical Parameters Monitored

Meteorological

Wind Speed
Wind Direction
Temperature
Relative Humidity
Solar Radiation
Precipitation

Hydrological

Stage Height
Velocity

Water Quality

Temperature
Ph
Dissolved Oxygen
Conductivity/Salinity
Specific Ion Probes

Air Quality

AATA assists clients in designing and implementing air quality programs which incorporate the following characteristics:

- Definition of baseline conditions
- Assessment of potential air quality impacts
- Assurance of compliance with environmental regulations
- Assessment of environmental management plans

Meteorological and ambient air monitoring are designed and sited to incorporate the requirements of the country in which the project is located, and also the specific needs of our clients. The monitoring plans are designed to be flexible to meet the changing needs and nature of an operation, and the variable nature of the surrounding environment.

Typical Air Quality Parameters Monitored

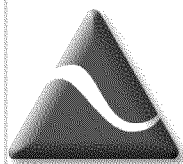
- Particulate matter (PM)
- Particulate matter with a diameter of less than 10 microns (PM-10)
- Sulfur Dioxide (SO₂)
- Nitrogen Oxides (NO_x)
- Ozone
- Carbon Dioxide
- Other air pollutants

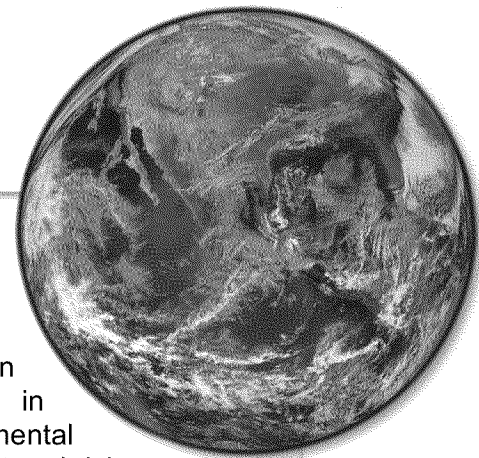
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Ecotoxicology is a highly integrative science that can take into account physical, chemical, biological, and social (human health) factors. Advancements in the integrated environmental approach and in ecotoxicology in general have led to the application of this science in identifying, analyzing, and solving many different types of environmental problems. Site-specific water quality standard setting, environmental impact and risk assessment, remedial action investigations, and prioritization of clean up alternatives depend upon ecotoxicology. AATA provides a wide range of ecotoxicological support services to clients worldwide. From rapid ecotoxicological screening tests to detailed evaluations of the effects of industrial operations on aquatic and terrestrial ecosystems and human health, AATA scientists provide a broad spectrum of applied ecotoxicological services to many different types of clients to support risk-based decision making.

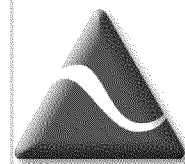
- Site Specific Water Quality Standard Development
- Watershed Based Management Programs
- Environmental Impact and Risk Assessment
- Support to Superfund RI/FS projects
- Development of Applicable Cleanup Goals or Criteria
- Risk-Based Decision Making
- Natural Resource Damage Assessments
- Input to Bankable Feasibility Studies
- Use Attainability Studies
- Innovative On-site Bioassay Testing
- Artificial Stream Investigations
- Ecotoxicology of Mine and Mill Wastes
- Translocation and Uptake Studies
- Bioaccumulation and bioconcentration Studies
- *In-situ* seed germination testing protocols
- Marine, Estuarine, and Freshwater Ecotox Studies
- Sediment Toxicity Studies
- Designed Bioassay Testing Programs

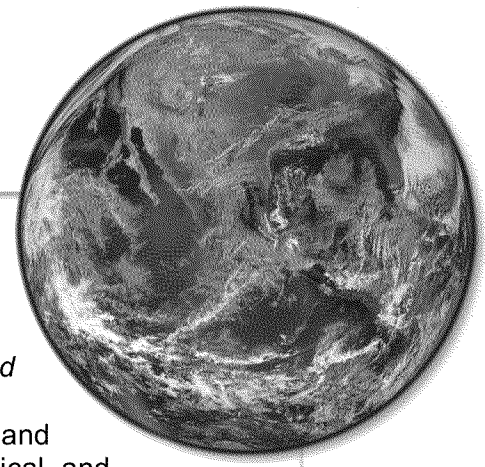
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The U.S. Environmental Protection Agency has recently codified procedures for quickly evaluating aquatic ecosystems for establishing their health, limiting factors, and other attributes. This new set of protocols is collectively termed *Rapid Bioassessment* and is a useful set of methods for assessing water quality conditions and impacts of man's activities upon rivers, lakes and streams. Aquatic organisms must integrate all of the physical, chemical, and biological factors which occur in their habitat to be able to survive. Therein lies the utility of using measurements, or "metrics" related to the existing plants and animals of an aquatic ecosystem, to gauge the health of the system. Many aquatic organisms have relatively narrow tolerance ranges for certain conditions, and can therefore serve as excellent "indicator species." Diatoms and benthic macroinvertebrates are exceptionally useful indicators that can be collected from both natural and artificial substrata. Collectively, much can be learned from evaluating the various biota of freshwater systems.

AATA International, Inc., provides all of the capabilities for rapid bioassessment of all types of aquatic ecosystems, including:

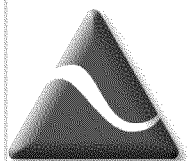
- Periphyton/phytoplankton
- Benthos
- Fish
- Index of biotic integrity
- Community metrics

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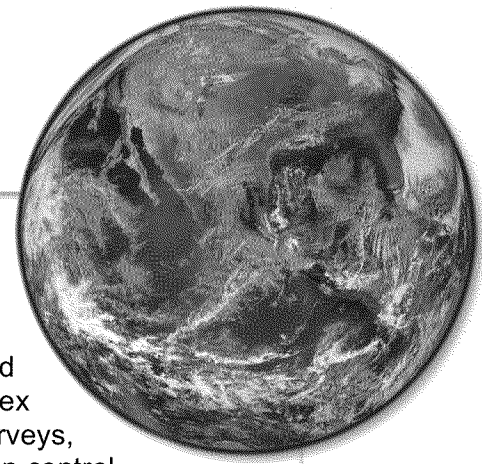
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AATA International's Expert Geographic Information System (XGIS) capabilities assist clients in analyzing and understanding complex geographically oriented data, analyses, and results. Many water quality related analyses are enhanced through the use of GIS capabilities, especially with respect to complex watershed management studies, non-point source pollution surveys, regional water quality planning, stormwater management and erosion control projects. AATA works from high-level LANDSAT/SPOT satellite imagery to low-level aerial photography. Non-point source assessments are greatly facilitated using GIS techniques, as are point source and other water quality studies. Comprehensive watershed management programs are easily and efficiently accomplished using the capabilities afforded by GIS. Water quality modeling results can be developed and superimposed on other physical, chemical, or biological attributes such as slope, soils, land-use, cover, sensitive species, etc. to provide very powerful environmental assessment capabilities. XGIS capabilities have now expanded to include animation of computer generated modeling results, spatially and/or temporally variable data, and other environmental attributes to illustrate complex points in simple terms that the public, administrative agencies and juries can understand.



AATA International, Inc. looks forward to being of support to you and your operation. For more information on AATA's Oil and Gas services, please contact our principals:

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